CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

JAS-ANZ BSCIC ISO 9001 REGISTERED

Job No.: CTCE/BBMP/W.No.11/BE/CEMENT/2012-13

Date: 27.03.2013

TEST REPORT

CLIENT	:	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
AGENCY	:	**M/s. Benaka Enterprises**, Contractor, Bangalore.
NAME OF THE WORK	:	Improvements to roads and drains in Gangammagudi and Velangini Road areas in Ward No. 11, Kuvempunagara, BBMP, Bangalore.
REFERENCE	:	AEE/Vidyaranyapura/PR/448/2012-13 Dated: 25.03.2013
SAMPLE ID	:	CEMENT
SAMPLES SUPPLIED BY	:	AGENCY

The results of the tests conducted on the cement sample are as follows:

Sl.No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-1989
1	a) Initial Setting Time	IS-4031 (Part -5)	181 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5)	497 Minutes	Not More than 600 Minutes
2	Soundness	IS-4031 (Part 3) by the Le-Chatelier method	1 mm	Not more than 10 mm
3	Standard Consistency	IS-4031 (Part -4)	29.00 %	-

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27/03/13

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು,
ವಿದ್ಯಾರಣ್ಯಪುರ ಉಪ ವಿಭಾಗ
ಯಲಹಂಕ ವಲಯ,
ಬೃ. ಬೆಂ. ಮ. ಪಾ., ಬೆಂಗಳೂರು-97.

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Job No.: CTCE/BBMP/W.No.11/BE/SAND/2012-13 : 27.03.2013

TEST REPORT ON FINE AGGREGATES (SAND)
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.

Agency : **M/s. Benaka Enterprises,** Contractor, Bangalore.

Name of Work : Improvements to roads and drains in Gangammagudi and Velangini Road areas in Ward No. 11, Kuvempunagara, BBMP, Bangalore.

Reference : AEE/Vidyaranyapura/PR/448/2012-13 Dated: 25.03.2013

Date of Testing : 27.03.2013

Material : Sand Total Wt. of Aggregates in gms **2000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits For Zone-II
10	0	0	0	100	100
4.75	83	4.15	4.15	95.9	90-100
2.36	225	11.25	15.40	84.6	75-100
1.18	419	20.95	36.35	63.7	55-90
600 Micron	517	25.85	62.20	37.8	35-59
300 Micron	434	21.70	83.90	16.1	8-30
150 Micron	194	9.70	93.60	6.4	0-10

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Job No.: CTCE/BBMP/W.No.11/BE/AGG/2012-13 : 27.03.2013

TEST REPORT ON COARSE AGGREGATES
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.

Agency : **M/s. Benaka Enterprises,** Contractor, Bangalore.

Name of Work : Improvements to roads and drains in Gangammagudi and Velangini Road areas in Ward No. 11, Kuvempunagara, BBMP, Bangalore.

Reference : AEE/Vidyaranyapura/PR/448/2012-13 Dated: 25.03.2013

Date of Testing : 27.03.2013

Material : 40mm Aggregates

Total Wt. of Aggregates in gms **25200**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits
80	0	0	0	100	100
40	989	3.92	3.92	96.08	95-100
20	16293	64.65	68.58	31.42	30-70
10	5056	20.06	88.64	11.36	10-35
4.75	2437	9.67	98.31	1.69	0-5

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Job No.: CTCE/BBMP/W.No.11/BE/STEEL/2012-13 30.03.2013

TEST REPORT ON REINFORCEMENT STEEL

Client	:	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
Agency	:	**M/s. Benaka Enterprises**, Contractor, Bangalore.
Name of the Work	:	Improvements to roads and drains in Gangammagudi and Velangini Road areas in Ward No. 11, Kuvempunagara, BBMP, Bangalore.
Reference	:	AEE/Vidyaranyapura/PR/448/2012-13 Dated: 25.03.2013
Date of Test	:	30.03.2013
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	10	0.62	516	548	12.95	O.K	O.K
2	12	0.89	519	551	13.25	O.K	O.K

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Job No.: CTCE/BBMP/W.No.11/BE/CUBE/2012-13

30.04.2013

TEST REPORT ON CONCRETE CUBES

Client	: **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
Agency	: **M/s. Benaka Enterprises,** Contractor, Bangalore.
Name of the work	: Improvements to roads and drains in Gangammagudi and Velangini Road areas in Ward No. 11, Kuvempunagara, BBMP, Bangalore.
Reference	: AEE/Vidyaranyapura/PR/448/2012-13 Dated: 25.03.2013
Sample ID	: RCC Drain Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete	: M_{20}
Compressive Strength as on	: 28^{th} day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	02.04.2013	30.04.2013	8.059	474.8	21.10
2	02.04.2013	30.04.2013	8.154	487.9	21.68
3	02.04.2013	30.04.2013	8.263	502.4	22.33

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Job No.: CTCE/BBMP/W.No.11/BE/CUBE/2012-13

13.05.2013

TEST REPORT ON CONCRETE CUBES

Client	: **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
Agency	: **M/s. Benaka Enterprises,** Contractor, Bangalore.
Name of the work	: Improvements to roads and drains in Gangammagudi and Velangini Road areas in Ward No. 11, Kuvempunagara, BBMP, Bangalore.
Reference	: AEE/Vidyaranyapura/PR/448/2012-13 Dated: 25.03.2013
Sample ID	: Road Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete	: M_{20}
Compressive Strength as on	: 28^{th} day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	15.04.2013	13.05.2013	8.357	494.5	21.98
2	15.04.2013	13.05.2013	8.419	513.6	22.83
3	15.04.2013	13.05.2013	8.264	475.9	21.15

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